STATE OF MARYLAND

DHMH

**Maryland Department of Health and Mental Hygiene**
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# December 18, 2009

# Public Health & Emergency Preparedness Bulletin: # 2009:49
# Reporting for the week ending 12/12/09 (MMWR Week #49)

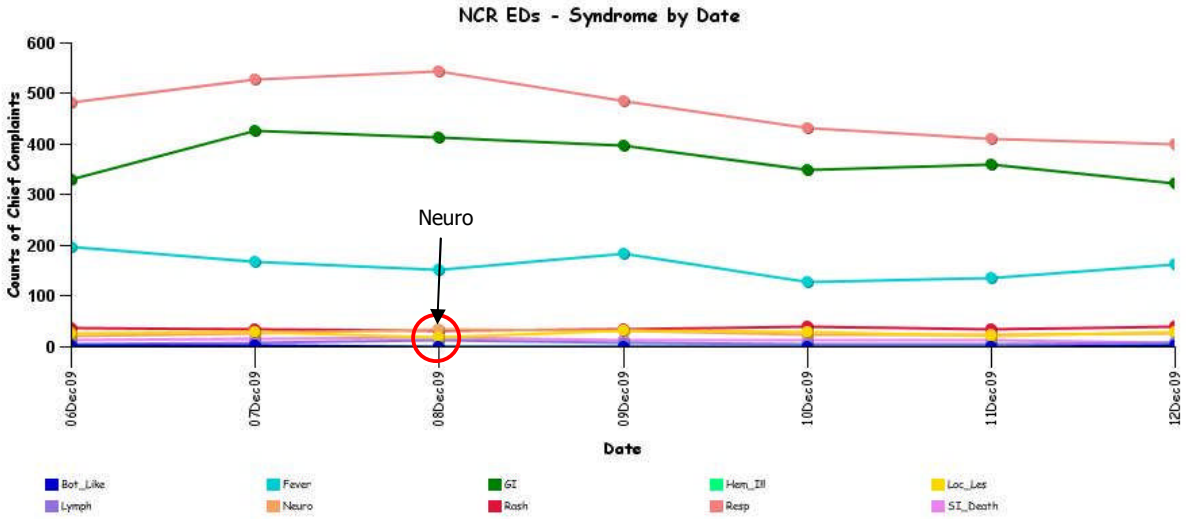
**CURRENT HOMELAND SECURITY THREAT LEVELS**

**National:** **Yellow (ELEVATED) *The threat level in the airline sector is Orange (HIGH)**
**Maryland:** **Yellow (ELEVATED)**

**SYNDROMIC SURVEILLANCE REPORTS**

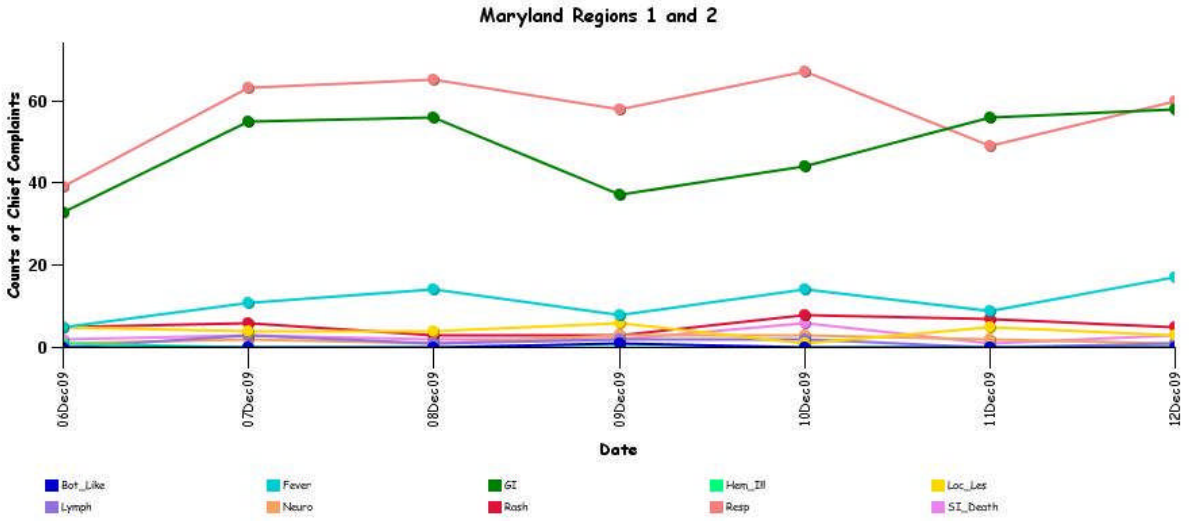
**ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):**
Graphical representation is provided for all syndromes, excluding the "Other" category, all age groups, and red alerts are circled.
Note: ESSENCE – ANCR Spring 2006 (v 1.3) now uses syndrome categories consistent with CDC definitions.

Overall, no suspicious patterns of illness were identified. Track backs to the health care facilities yielded no suspicious patterns of illness.

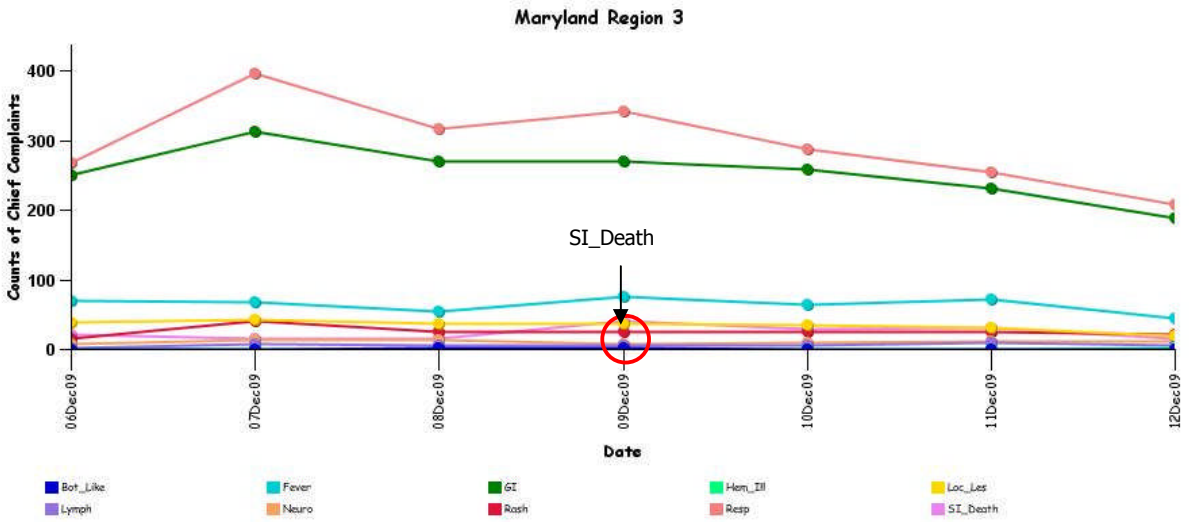



* Includes EDs in all jurisdictions in the NCR (MD, VA, and DC) reporting to ESSENCE

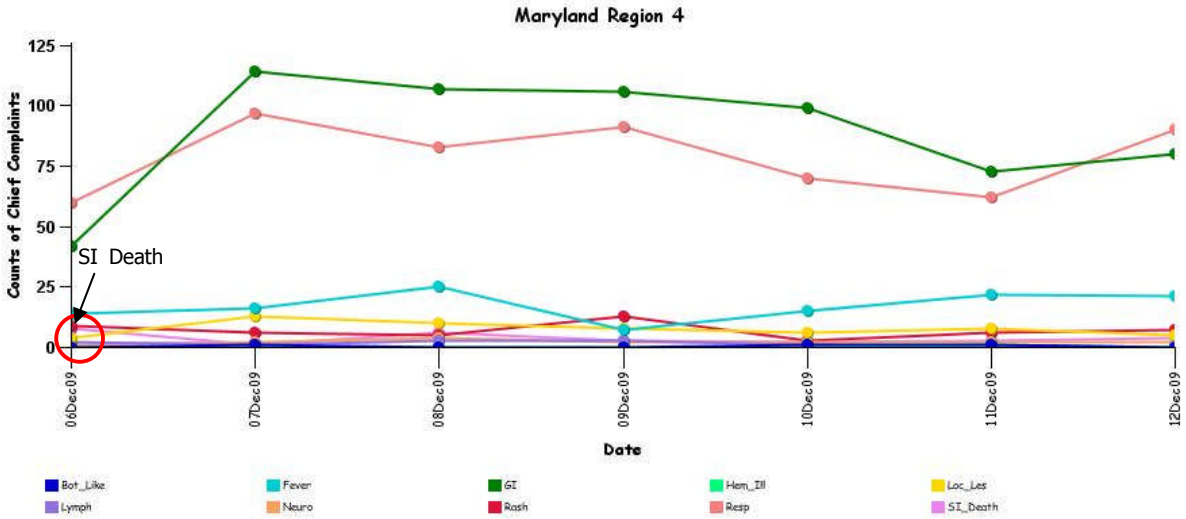
**MARYLAND ESSENCE:**



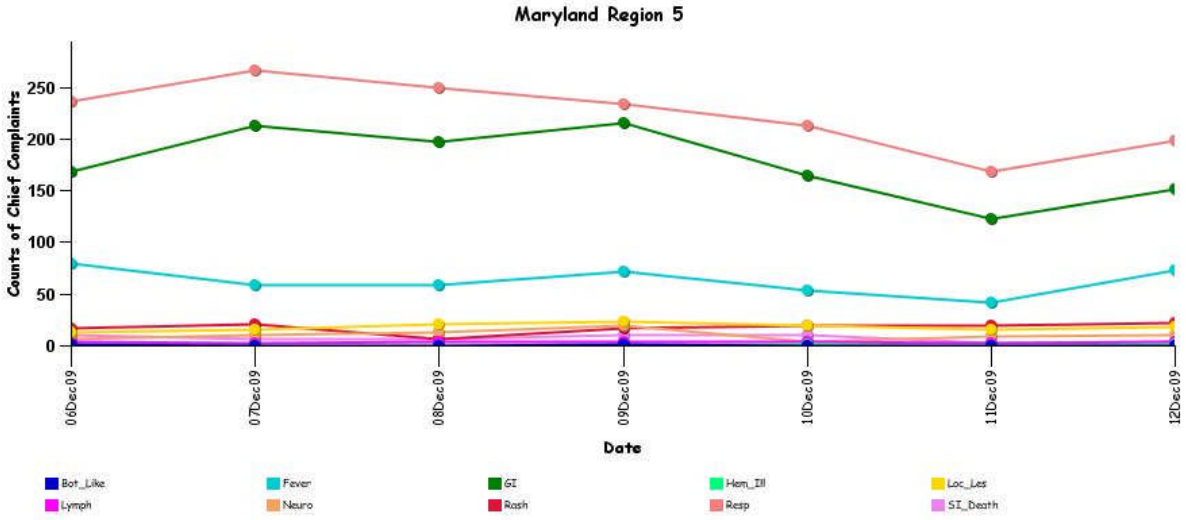

* Region 1 and 2 includes EDs in Allegany, Frederick, Garrett, and Washington counties reporting to ESSENCE




* Region 3 includes EDs in Anne Arundel, Baltimore city, Baltimore, Carroll, Harford, and Howard counties reporting to ESSENCE

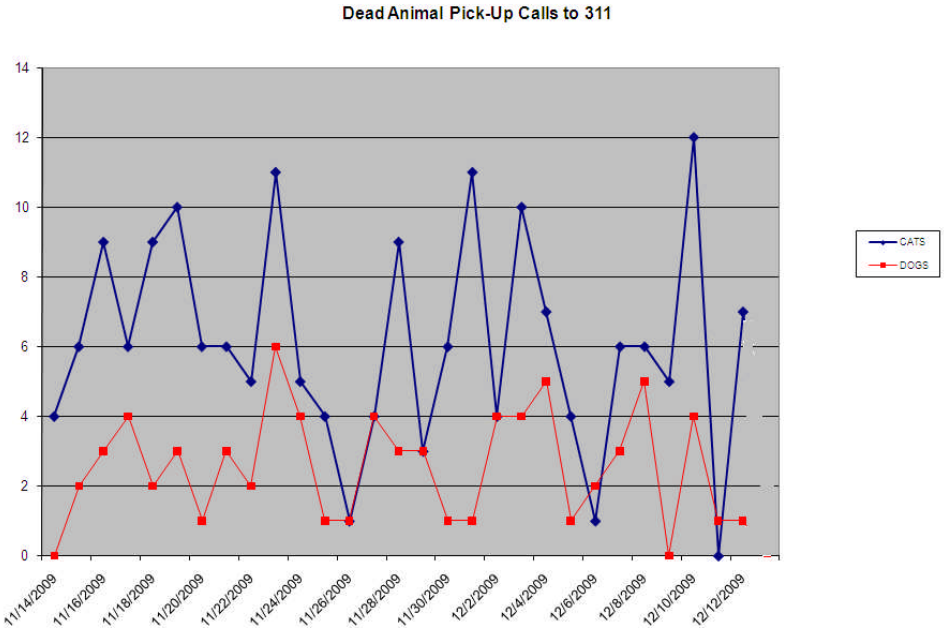



* Region 4 includes EDs in Cecil, Dorchester, Kent, Somerset, Talbot, Wicomico, and Worcester counties reporting to ESSENCE



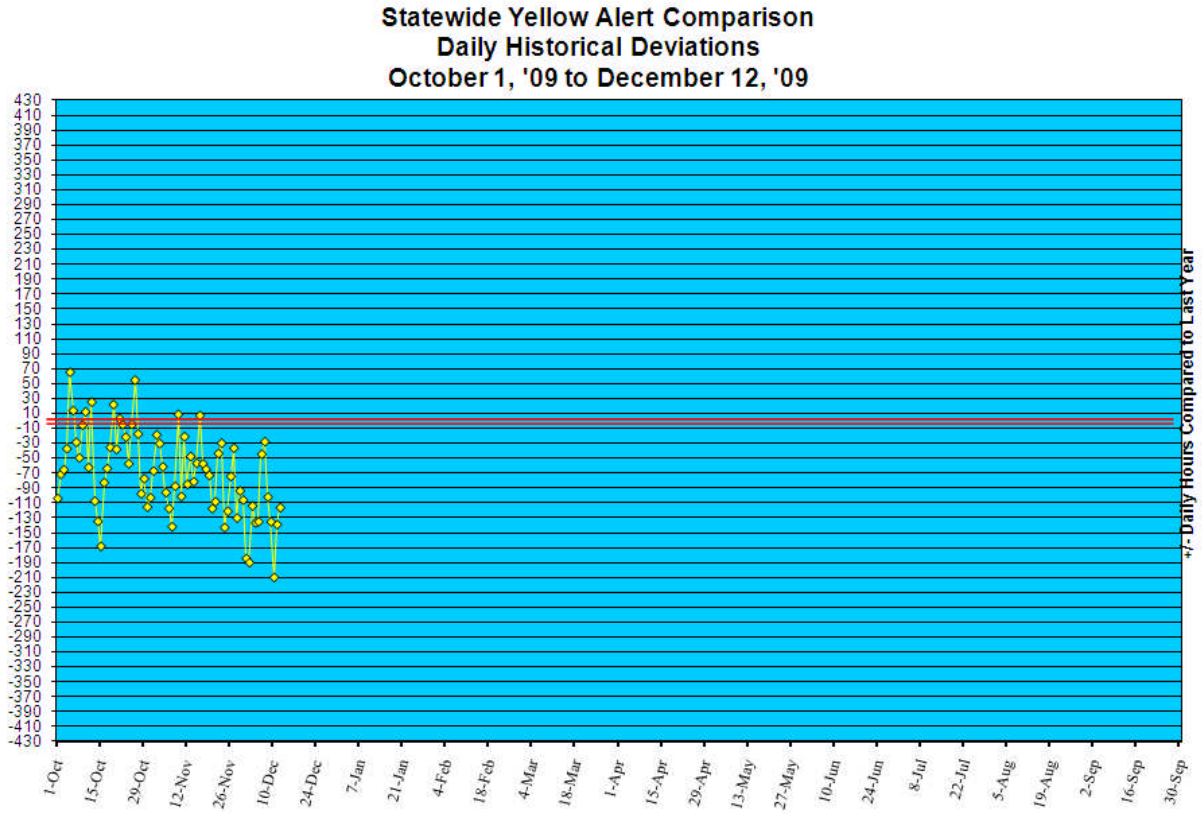

* Region 5 includes EDs in Calvert, Charles, Montgomery, Prince George's, and St. Mary's counties reporting to ESSENCE

**BALTIMORE CITY SYNDROMIC SURVEILLANCE PROJECT:** No suspicious patterns in the medic calls, ED Syndromic Surveillance and the animal carcass surveillance. Graphical representation is provided for animal carcass surveillance 311 data.




**REVIEW OF EMERGENCY DEPARTMENT UTILIZATION**

**YELLOW ALERT TIMES (ED DIVERSION):** The reporting period begins 10/01/09.



## REVIEW OF MORTALITY REPORTS

**Office of the Chief Medical Examiner:** OCME reports no suspicious deaths related to an emerging public health threat for the week.

## MARYLAND TOXIDROMIC SURVEILLANCE

**Poison Control Surveillance Monthly Update:** Investigations of the outliers and alerts observed by the Maryland Poison Center and National Capital Poison Center in November 2009 did not identify any cases of possible public health threats.

## REVIEW OF MARYLAND DISEASE SURVEILLANCE FINDINGS

**COMMUNICABLE DISEASE SURVEILLANCE CASE REPORTS (confirmed, probable and suspect):**

| **Meningitis:** | **Aseptic** | **Meningococcal** |
|---|---|---|
| New cases (Dec 06- Dec 12, 2009): | 28 | 0 |
| Prior week (Nov 29- Dec 05, 2009): | 18 | 0 |
| Week#49, 2008 (Nov 30– Dec 06, 2008): | 15 | 0 |

**OUTBREAKS: 1 outbreak was reported to DHMH during MMWR Week 49 (December 06- December 12, 2009):**

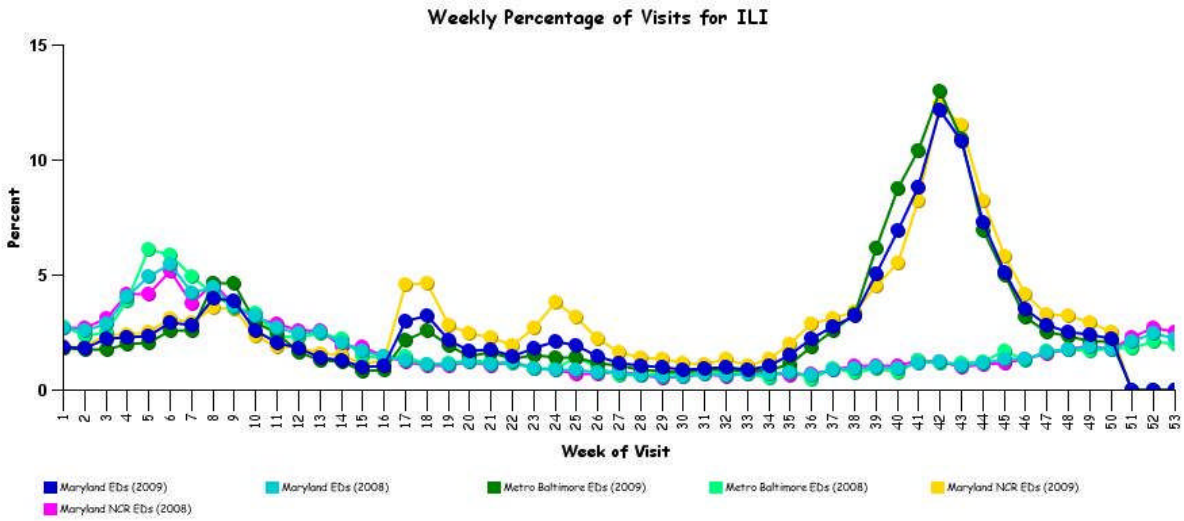
**1 Gastroenteritis outbreak**
1 outbreak of GASTROENTERITIS in an Assisted Living

**MARYLAND INFLUENZA STATUS:** Influenza activity in Maryland for Week 49 is LOCAL.

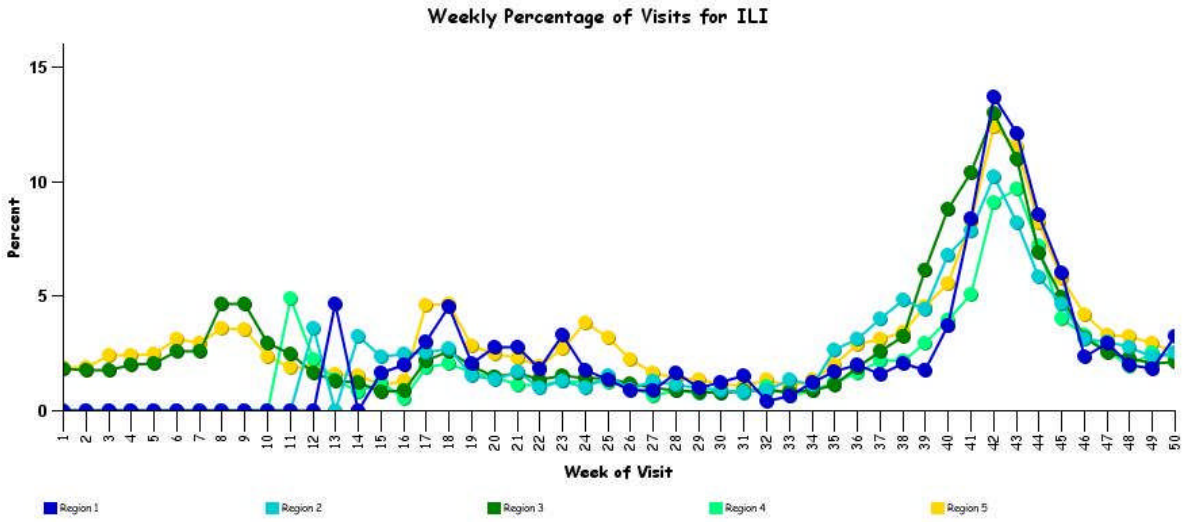
## SYNDROMIC SURVEILLANCE FOR INFLUENZA-LIKE ILLNESS

Graphs show the percentage of total weekly Emergency Department patient chief complaints that have one or more ICD9 codes representing provider diagnoses of influenza-like illness. These graphs do not represent confirmed influenza.

Graphs show proportion of total weekly cases seen in a particular syndrome/subsyndrome over the total number of cases seen. Weeks run Sunday through Saturday and the last week shown may be artificially high or low depending on how much data is available for the
week.



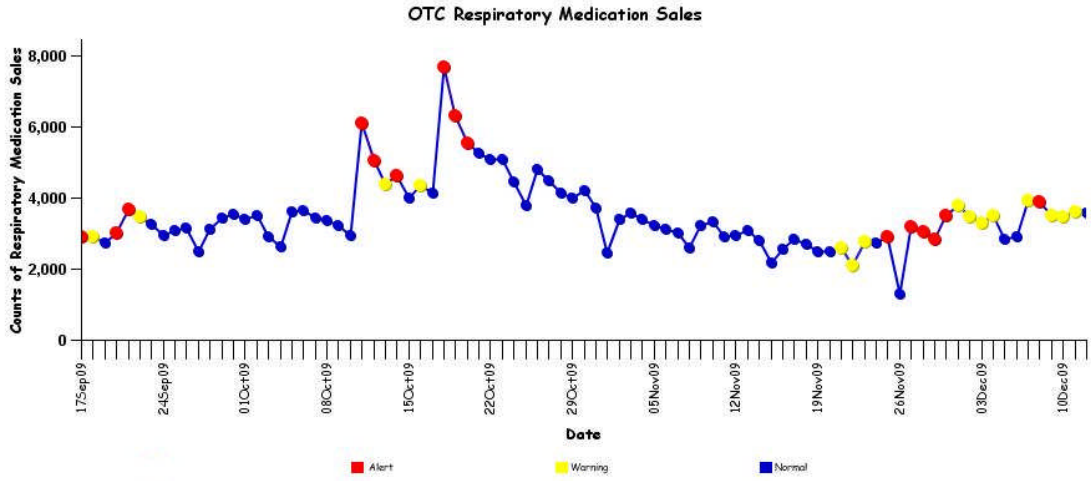

* Includes 2008 and 2009 Maryland ED visits for ILI in Metro Baltimore (Region 3), Maryland NCR (Region 5), and Maryland Total




*Includes 2009 Maryland ED visits for ILI in Region 1, 2, 3, 4, and 5
2009 data for these regions are depicted separately to establish baselines, due to the addition of new hospitals in these regions.

**OVER-THE-COUNTER (OTC) SALES FOR RESPIRATORY MEDICATIONS:**

Graph shows the daily number of over-the-counter respiratory medication sales in Maryland at a large pharmacy chain.



**PANDEMIC INFLUENZA UPDATE:**

**WHO Pandemic Influenza Phase:** Phase 6: Characterized by community level outbreaks in at least one other country in a different WHO region in addition to the criteria defined in Phase 5. Designation of this phase will indicate that a global pandemic is under way. Definition of Phase 5 is characterized by human-to-human spread of the virus into at least two countries in one WHO region. While most countries will not be affected at this stage, the declaration of Phase 5 is a strong signal that a pandemic is imminent and that the time to finalize the organization, communication, and implementation of the planned mitigation measures is short.

**US Pandemic Influenza Stage:** Stage 0: New domestic animal outbreak in at-risk country

**More information regarding WHO Pandemic Influenza Phase and US Pandemic Influenza Stage can be found at: http://preparedness.dhmh.maryland.gov/Docs/PandemicInfluenza/PandemicInfluenzaResponseAnnex(Version7.2).pdf

**AVIAN INFLUENZA-RELATED REPORTS:**

**WHO update:** As of December 11, 2009, the WHO-confirmed global total of human cases of H5N1 avian influenza virus infection stands at 445, of which 263 have been fatal. Thus, the case fatality rate for human H5N1 is about 59%.

**AVIAN INFLUENZA, HUMAN (VIET NAM):** 11 Dec 2009, The Ministry of Health has reported a new confirmed case of human infection with the H5N1 avian influenza virus. The case has been confirmed at the National Institute of Hygiene and Epidemiology (NIHE). The case is a man from Dien Bien Phu city, Dien Bien Province. He developed symptoms on 18 Nov 2009, was hospitalized at Dien Bien general hospital and died on 28 Nov 2009. The source of exposure is currently under investigation. His family keeps some chickens and wild geese in their household. Of the 112 cases confirmed to date in Viet Nam, 57 have been fatal.

**H1N1 INFLUENZA (Swine Flu):**

**INFLUENZA (H1N1) 2009 , CASE ESTIMATES:** 11 Dec 2009, Another month's worth of data on pandemic (H1N1) 2009 influenza virus infection has led federal officials to more than double their estimates of total cases, hospitalizations, and deaths and to assert that the impact on children and younger adults has been far greater than that of a typical flu season. After analyzing data for the weeks from 18 Oct 2009 through 14 Nov 2009, the Centers for Disease Control and Prevention (CDC) estimated that 47 million people, or about 15 percent of the population, have been infected and 9820 have died in the pandemic. That compares with estimates of 22 million cases and 3900 deaths issued 12 Nov 2009 and covering the period from April through 17 Oct 2009. The new estimate of hospitalizations is 213 000, compared with 98 000 a month ago. "By 14 Nov 2009, many times more children and younger adults, unfortunately, have been hospitalized or killed by [pandemic] H1N1 influenza than happens in a usual flu season," CDC Director Dr Thomas Frieden said in a news briefing today [10 Dec 2009]. The additional weeks covered in the latest report spanned the peak period for the fall wave of H1N1. In terms of the number of states reporting widespread activity, the last 2 weeks in October marked the crest, with 48 states in that situation. The number dropped to 43 states by the 2nd week in November and has declined further since. In an online report, the CDC estimated there have been 16 million cases in children up through age 17, leading to 71 000 hospitalizations and 1090 deaths. For adults age 18 through 64, the agency estimated 27 million cases, 121 000 hospitalizations, and 7450 deaths. For elderly people, who are believed to have some protection from the virus because of past flu exposures, the new estimates are 4 million cases, 21 000 hospitalizations, and 1280 deaths. Less than 5 percent of the increases in total cases, hospitalizations, and deaths are explained by late reporting of events that occurred before 17 Oct 2009, the CDC report says. Frieden commented, "There is some correction for late reporting. But there has been a lot more disease in the month that's reported than in the months before." All the numbers represent the midpoints of ranges of estimates the CDC produced with a new estimation method, which was unveiled on 12 Nov 2009. The numbers of confirmed cases and related hospitalizations and deaths are far lower, because most people infected, including some who get severely sick, are not tested. When he was asked to compare the H1N1 pandemic with seasonal flu, Frieden said, "We know that it's much milder for older people. It's much less likely to result in death because older people are much less likely to get infected. But it has been a much worse flu season for people under the age of 65, particularly younger adults and children." According to CDC estimates that are often quoted, the nation has about 200 000 flu-related hospitalizations and 36 000 deaths in an average flu season, with about 90 percent of the deaths occurring in elderly people. Frieden noted today [10 Dec 2009] that the pandemic estimates are not derived in the same way as these seasonal flu estimates. While the estimation methods are different, seasonal flu is believed to cause fewer than 1000 deaths per year in people younger than 50, he added. He said the CDC doesn't have a specific estimate of H1N1 deaths among adults under age 50, but a "large share" of the adult deaths is in that group. "So it is really many times more severe in terms of severe illness, and hospitalizations are several times higher for children and young adults than in a usual flu season," he said. The CDC estimates that between 5 percent and 20 percent of the population get seasonal flu in an average year. If 15 percent of people have already been infected with H1N1, the nation, 8 months into the pandemic, is already approaching the upper end of the average attack rate for seasonal flu. However, the estimated death toll so far, 9820, remains well below the estimated seasonal flu toll of 36 000, though children and younger adults make up about 87 percent (8540) of that total, the opposite of what is seen with seasonal flu. Meanwhile, the estimate of 213 000 [pandemic] H1N1 hospitalizations is slightly above the estimate of 200 000 hospital cases for a typical flu season. In terms of case-fatality rate (CFR), the new CDC estimate of 9820 deaths in 47 million cases translates into an overall rate of about 0.021 percent, or about 210 deaths per million people sickened by the virus. That's just slightly higher than the 0.018 percent CFR indicated by the previous CDC estimate of 3900 deaths among 22 million cases. But the CFRs differ considerably by age group. The CFR for children, with an estimated 1090 deaths in 16 million cases, comes to 0.007 percent, or about 70 deaths

in a million cases. The CFR for adults between 18 and 64 comes out much higher, at 0.028 percent, or 280 deaths per million. And the rate for the elderly is higher yet, at 0.032 percent, or 320 deaths in a million cases -- supporting the view that while seniors seem less likely to get sick, they are more likely to die if they do. Frieden used the new estimates to stress the importance of getting vaccinated against the pandemic virus. If about 15 percent of the population has already been infected, he said, "That still leaves most people not having been infected and still remaining susceptible to H1N1 influenza." He reported that another 12 million doses of vaccine became available in the past week, bringing the cumulative total to about 85 million doses. Many states now have met the vaccine demand from priority groups and have begun offering doses to everyone, he added. The CDC in the past week began offering the vaccine to all employees, in line with state policy in Georgia, Frieden reported. Though cases have been declining recently, vaccination is prudent given the possibility of a 3rd wave of cases this winter [2009-10], he said. "Flu season lasts until May. And we don't know what the future will bring in terms of H1N1 influenza," he observed.

**INFLUENZA PANDEMIC (H1N1) 2009, ANIMAL, FELINE, (USA -OREGON, CALIFORNIA):** 11 Dec 2009, A 2nd cat in Oregon has died after becoming infected with the H1N1 pandemic flu virus. The cat's owner presented the 8 year-old spayed female to an emergency veterinary clinic on 24 Nov 2009, complaining that the cat was suffering from severe weakness and pain. The cat was described as "hypothermic and dehydrated", and had excessive nasal discharge. Further investigation showed that the cat had developed pneumonia. A nasal discharge sample was collected and tested positive for the 2009 H1N1 influenza virus by the Oregon State University Veterinary Diagnostic Laboratory. Despite supportive care and treatment with anti-viral drugs, the cat died on the same evening. Further investigation by the Oregon state public health veterinarian confirmed that the owner had been suffering from H1N1 influenza virus, meaning that both cats who have died from this influenza virus contracted the virus from their owners. The news follows an announcement by France's Director General of Health that a cat in France has tested positive after catching the virus from one of 2 infected children in the same household. In this case the cat recovered after approximately a week. In other developments, 2 cats from different households in Colorado have been confirmed as testing positive for H1N1 influenza. These cats are 10 and 11 years old, and the Colorado State University's Veterinary Diagnostic Laboratory confirmed that the cats have fully recovered. "Because this strain of H1N1 is new, information about how it impacts animals is limited. It is possible that any animal may be susceptible to H1N1, but no other cases have been documented in companion animals. To date, there are no reported cases of H1N1 in dogs in the United States. Pet birds have been susceptible to other strains of the flu, but no cases of H1N1 in these animals have been reported," said Kristy Pabilonia, a veterinarian and expert on H1N1 testing in animals at Colorado State University.

**INFLUENZA PANDEMIC (H1N1) 2009 (PAN AMERICAN HEALTH ORGANIZATION):** 09 Dec 2009, The information contained within this update is obtained from data provided by Ministries of Health of Member States and National Influenza Centers through reports sent to Pan American Health Organization (PAHO) or updates on their web pages.

Weekly Update:
- In North America, acute respiratory disease activity continued to decrease but still is higher than expected in most areas.
- In the Caribbean, unchanged trends in acute respiratory disease were reported.
- Central America reported decreasing or unchanged trends in acute respiratory disease.
- South America reported decreasing or unchanged trends of acute respiratory disease.
- In some countries, the number of specimens positive for pandemic (H1N1) 2009 virus has been steadily decreasing in recent weeks, however more than 90 percent of subtyped influenza A viruses were pandemic (H1N1) 2009.
- 253 new confirmed deaths in 6 countries were reported; in total, there have been 6131 cumulative confirmed deaths.

**INFLUENZA PANDEMIC (H1N1) 2009, AUTOPSY FINDINGS:** 08 Dec 2009, In fatal cases of pandemic (H1N1) 2009 influenza, the virus can damage cells throughout the respiratory airway, much like the viruses that caused the 1918 and 1957 influenza pandemics, report researchers from the National Institutes of Health (NIH) and the New York City Office of Chief Medical Examiner. The scientists reviewed autopsy reports, hospital records and other clinical data from 34 people who died of pandemic (H1N1) 2009 influenza virus infection between 15 May 15 and 9 Jul 2009. All but 2 of the deaths occurred in New York City. A microscopic examination of tissues throughout the airways revealed that the virus caused damage primarily to the upper airway -- the trachea and bronchial tubes -- but tissue damage in the lower airway, including deep in the lungs, was present as well. Evidence of secondary bacterial infection was seen in more than half of the victims. The team was led by James R. Gill, M.D., of the New York City Office of Chief Medical Examiner and New York University School of Medicine, and Jeffery K. Taubenberger, M.D., Ph.D., of the National Institute of Allergy and Infectious Diseases (NIAID) at NIH. The findings are reported in the Archives of Pathology & Laboratory Medicine, now available online and scheduled to appear in the February 2010 print issue.

**Resources:**

http://www.cdc.gov/h1n1flu/

http://www.dhmh.maryland.gov/swineflu/

**NATIONAL DISEASE REPORTS**

**TULAREMIA, LABORATORY-ACQUIRED (MARYLAND):** 07 Dec 2009, A researcher at the United States Army Medical Research Institute of Infectious Diseases (USAMRIID) in Frederick, Maryland, has contracted tularemia, also known as rabbit fever. USAMRIID officials announced today, 4 Dec 2009. The illness is caused by the bacterium _Francisella tularensis_, one of several biosafety level 3 pathogens that scientists work with at USAMRIID. The researcher, a woman who was working on a project to

develop a vaccine against the disease, is "recuperating at home and is responding well to antimicrobial therapy," according to a press release issued by the institute. Rabbits, rodents, and other animals harbor the microbe. Nearly 200 cases of tularemia in the USA are reported to the CDC every year; most of them are caused by bites from ticks and flies and from handling animals infected from the disease. The illness can also be contracted by inhaling airborne bacteria in the lab. "We want to reassure the Frederick and Fort Detrick communities that this disease is not spread from person to person," USAMRIID Commander John P Skvorak said in a statement. "Our immediate concern is to make sure our employee is receiving the appropriate medical care. Secondly, we are working to determine how she may have been infected and to ensure that no one else has been affected. Laboratory-acquired infections are rare, but if they do occur, we need to review our procedures to minimize future incidents." (Tularemia is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

**INTERNATIONAL DISEASE REPORTS**

**Q FEVER (NETHERLANDS):** 09 Dec 2009, An estimated 15 000 to 20 000 goats and sheep in the Netherlands are to be slaughtered in connection with Q-fever. Minister of Health Ab Klink and Minister of Agriculture Gerda Verburg have agreed that on infected farms where animals have not been vaccinated, all pregnant animals must be slaughtered, whether or not they have the virus [sic; the agent is a bacterium]. Q-fever is caused by bacteria (_Coxiella burnetii_) released when pregnant goats or sheep have spontaneous abortions. The disease is prevalent in areas in the southern Netherlands with large-scale goat farms and a relatively dense population. This year [2009] alone, 2200 [in fact, 2293 cases as of 25 Nov 2009] people have contracted it, most of them in the southern rural province of Brabant. At least 6 people have died. (Q fever is listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

**ANTHRAX, HUMAN, BOVINE (ZIMBABWE):** 07 Dec 2009, An outbreak of anthrax involving 3 deaths has been reported to the United Nations. Pero Byrs reported this disease in cattle. "In order to eat meat, people had bought it from butchers without the necessary health guarantees." According to the Save the Children Fund organization, the outbreak has resulted in the deaths of 2 children and one adult and threatened some 60 000 head of cattle in the northern valley of the Zambezi. 32 human cases had been detectedin Binga District. (Anthrax is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

**OTHER RESOURCES AND ARTICLES OF INTEREST**

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website: http://preparedness.dhmh.maryland.gov/

Maryland's Resident Influenza Tracking System: www.tinyurl.com/flu-enroll

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**NOTE**: This weekly review is a compilation of data from various surveillance systems, interpreted with a focus on a potential BT event. It is not meant to be inclusive of all epidemiology data available, nor is it meant to imply that every activity reported is a definitive BT event. International reports of outbreaks due to organisms on the CDC Critical Biological Agent list will also be reported. While not "secure", please handle this information in a professional manner. Please feel free to distribute within your organization, as you feel appropriate, to other professional staff involved in emergency preparedness and infection control.

For questions about the content of this review or if you have received this and do not wish to receive these weekly notices, please e-mail me. If you have information that is pertinent to this notification process, please send it to me to be included in the routine report.

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